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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/649,802	08/29/2000	C. David Young	99CR100/KE	9800

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Rockwell Collins Inc
Attention Kyle Eppele
M S 124 323
400 Collins Rd NE
Cedar Rapids, IA 52498

EXAMINER	
WONG, BLANCHE	

ART UNIT	PAPER NUMBER
2667	3

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/649,802	YOUNG, C. DAVID	
	Examiner	Art Unit	
	Blanche Wong	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,7,8 and 10-20* is/are rejected.

7)☒ Claim(s) *1,2-12 and 14-19* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *#2/Aug 29, 2000*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the step of explicitly reserving (claim 7), the optimizing step (claims 8,9,11), the determining step (claims 9,10,12), the calculating steps (claims 10 and 12), a wireless communication component (claim 13) or means for wireless communication (claim 20), a memory component (claim 13) or means for storing information (claim 20), and a processor component (claim 13) or means for processing data (claim 20), any instructions (claims 13-20) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. **Claims 1 and 16** objected to because of the following informalities:

Examiner suggests adding "of the" before – standby communication slot – in claim 1, ln. 6, and thus – slot – becomes "slots."

Examiner suggest adding "the" between – with – and – at – in claim 16, line 2, so that it reads "with the at least one indicated standby communication slot".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. There is insufficient antecedent basis for these limitations in the claims 1-2,7-8 and 10-20:

Claim 1 recites the limitation "one standby communication slot" and " at least one of the standby communication slots" in lines 6 and 11 respectively.

Claim 2 recited the limitation "the status of the designated standby communication slot" in line 2.

Claim 7 recited the limitation "the at least one explicitly reserved standby communication slot" in lines 4 and 6.

Claim 8 recites the limitation "the at least one standby communication slot" in line 3.

Claim 10 recited the limitation "communication channels" in line 2.

Claim 11 recited the limitation "the available options" and "the node's own opportunity" in lines 4 and 5 respectively.

Claim 12 recited the limitation "the required number of channels", "the fixed number of channels" and "the required number of communication slots" in lines 1,3,5 respectively.

Claims 13-20 recited the limitation "the instruction" throughout the claims.

Claim 14 recited the limitation "the at least one indicated standby communication slot" in lines 2-3 and lines 5-6. The same limitation appear in claim 15, lines 3 and 5; and claim 16, line 4.

Claim 19 recited the limitation "the at least one standby communication slot" in lines 2 and 3.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claim 1** rejected under 35 U.S.C. 103(a) as being unpatentable over Sardana (U.S. Pat No. 5,012,469) in view of Young (U.S. Pat No. 6,317,436 B1) (cross referenced by the applicant).

Regarding claim 1, Sardana discloses adaptive hybrid multiple (possibly broadcast) access (channel) protocols for a TDMA (time multiplex basis) network having plurality of stations (nodes) and scheduling communication via time slots, including minislots (Fig. 4A-19B). However, Sardana's design is specific for a plurality of stations sharing a single transmission channel or single-channel and scheduling is limited to dynamically switching among three states: contention, reservation, and fixed assignment. Sardana fails to specifically point out steps of adaptive broadcast channeling. In an analogous art, Young 6,317,436 B1 discloses a method and

apparatus for managing communication resources using an adaptive broadcast cycle (ABC). Young not only discloses neighborhood of nodes (Fig. 1), but also USAP-MA Frame Structure and Slot Schedule (broadcast schedule) having broadcast (transmit broadcast slots), standby broadcast (standby communication slot), assignment of a specific transmit broadcast slots and designation of standby communication slots can be seen in Fig. 9-13. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the adaptive access protocols of Sardana to include an adaptive broadcast cycle, as taught by Young, capable of using both broadcast and unicast techniques dependent upon the state of the communication environment and able to handle a full range of date types. Young, col. 2, ln. 33-48.

7. **Claims 13 and 20** rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (U.S. Pat No. 6,442,157) in view of Young (U.S. Pat No. 5,719,868) (provided by the applicant).

Regarding claims 13 and 20, Carter discloses a communication apparatus 60 (computer) capable of participating (col. 6, ln. 5-7) in a TDMA network (Fig. 1) via scheduled communication slots (Fig. 3 and 5, channel queuing and each channel has three timeslots), wireless communication devices 24, processor 62 coupled with memory 64, processor performs programming instruction stored in memory (col. 6, ln. 16-19).

However, Carter fails to disclose the memory storing a communication schedule and data. Carter did not specifically say that the instructions are for dynamically managing the communication schedule and for receiving and transmitting data. As

mentioned above for claims 1-6, Young discloses a communication schedule and data for associating a standby slot with a broadcast slot and assigning a specific transmit broadcast slot.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the system disclosed by Young the components in Carter to provide a system and method for quality-driven selection in a communication network. Carter, col. 2, ln. 22-61.

Allowable Subject Matter

8. Claim 2-12,14-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ahmadi et al. (U.S. Pat No. 5,613,198) discloses a multi-access scheme for mobile integrated LAN. The scheme minimizes interference. A particular channel is assigned. Bandwidth is dynamically allocated by time division according to user demand (random access = 40 – reserved portion 405). Wireless devices can be found in Fig. 1.

Bauchot et al. (U.S. Pat No. 5,644,576) discloses a medium access control scheme for wireless LAN using a variable length interleaved time division frame. Fig. 2 shows a microprocessor system 56 that has program 66 and data 68 storages. A wireless device 54 (RF transceiver) is coupled to the microprocessor system.

Fulghum (U.S. Pat No. 5,502,722) discloses a method and apparatus for a radio system using variable transmission reservation. A transceiver 113 monitors the reservation channel to find an open communication slot and explicitly reserves the communication slot 213 by transmitting a reservation signal. Fig. 3-6. Wireless devices can be found in Fig. 1, and memory 780, controller 760 (processor component) and antenna 720 (wireless communication component) can be found in Fig. 7.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 703-305-8963. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW

March 2, 2004

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600